MONTHLY WEATHER REVIEW,

NOVEMBER, 1880.

(General Weather Service of the United States.)

WAR DEPARTMENT,

Office of the Chief Signal Officer,

DIVISION OF

TELEGRAMS AND REPORTS FOR THE BENEFIT OF COMMERCE AND AGRICULTURE.

INTRODUCTION.

In preparing this REVIEW the following data, received up to December 14th, have been used, viz: the regular tri-daily weather charts, containing the data of simultaneous observations taken at 144 Signal Service stations and 15 Canadian stations, as telegraphed to this office; 166 monthly journals and 157 monthly means from the former, and 15 monthly means from the latter; reports from 3 Sunset stations; 226 monthly registers from Voluntary Observers; 32 monthly registers from United States Army Post Surgeons; Marine Records; International Simultaneous Observations; monthly reports from Voluntary Observers in, and the local Weather Service of, Missouri; reliable newspaper extracts; special reports.

BAROMETRIC PRESSURE.

Upon chart No. II is shown, by the isobaric lines, (in black) the distribution of atmospheric pressure over the United States for November, 1880. On the Pacific Slope an area of unusually high pressure prevailed over Oregon and Washington Territory, the mean being above 30.30 at all Oregon stations. An area of very high pressure covered the Middle States and the Ohio valley and Tennessee, the mean ranging in these districts from 30.22 to 30.29. Except at the Rocky Mountain stations, in the Plateau districts, the South Atlantic and Eastern Gulf States, the mean pressures have been decidedly greater than have ever before been recorded by this Service in November.

Departures from Normal Values for the Month.—By comparison with the average for seven years it is found that the barometric pressure for November, 1880, except in the Plateau and Rocky Mountain districts (where the departures from the normal have been slight and unimportant,) has been very decidedly above the average. The excess in New England, the Middle States, the Lower Lake region and the Ohio valley has ranged from 0.16 inch to 0.20; elsewhere, except along the immediate Gulf coast, it varied from 0.10 to 0.19. On the Pacific coast the excess was 0.08 at San Diego, 0.12 at San Francisco and 0.20 at Portland.

The Local Barometric Ranges, from readings reduced to sea-level, have, during November, 1880, been greater than usual. These ranges, eastward of the 102nd meridian, as a rule, increase from the coast toward the interior so that lines of equal ranges are generally parallel to the sea coast. In the Gulf States the lines deviate slightly from this rule and trend from the northeast to the southwest—the fluctuations in Texas being decidedly greater than in Florida. The local ranges for the month decrease gradually along the Gulf coast from 0.92 at Indianola to 0.36 at Punta Rassa and Key West. Along the Atlantic coast they increase gradually from 0.51 at Jacksonville to 1.23 at Portland, Me. The greatest fluctuations occurred over the Lake region and the Ohio valley; greatest ranges, 1.44 inches at Marquette, 1.45 at Columbus, 1.48 at Madison and Rochester and 1.50 at Buffalo. In the elevated plateaux of the country the range increases quite regularly with the latitude, while on the Pacific Slope the lines of equal ranges trend from northwest to southeast, indicating that the range increases with latitude and elevation. The greatest ranges on that coast were 1.19 at Olympia and 1.42 at Umatilla.

General Barometric Range.—The extreme range of the atmospheric pressure, reduced to sea-level, was 1.75 inch, from 30.86 at Cincinnati on the morning of the 22nd, to 29.11 at Father Point on the afternoon of the 7th.